

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-11 (canceled)

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Claim 12. (new) A gateway apparatus capable of connecting to the Internet, the gateway apparatus being one of a plurality of components in a home network, the home network including a transmitting apparatus not having an IP address connected to the gateway apparatus and an input device connected with the gateway apparatus, the gateway apparatus comprising;

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a communicator that is configured to communicate with a receiving apparatus through the Internet;

a controller that is configured to receive data from the transmitting apparatus not having the IP address, to configure the data for Internet transmission, to generate an Internet-frame based on the data and an IP address which is assigned to a receiving apparatus, the IP address assigned to the receiving apparatus being input by the input device, and to send the Internet-frame to the receiving apparatus through the communicator.

Claim 13. (new) The gateway apparatus according to claim 12, wherein the input device is a personal computer.

Claim 14. (new) The gateway apparatus according to claim 12, wherein the controller configures the data into TCP packets for Internet transmission and generates an Internet-frame based on the TCP packets.

Claim 15. (new) The gateway apparatus according to claim 12, wherein the transmitting apparatus not provided with an IP address is at least one of a printer, a scanner, a television, a digital camera, a refrigerator, a hot-water supply, an electric power meter and a water meter.

Claim 16. (new) A gateway apparatus capable of connecting to the Internet, the apparatus being one of a plurality of components in a home network, the apparatus comprising;

an interface that is configured to connect with a receiving apparatus not having an IP address;

a communicator that is configured to communicate with a transmitting apparatus through the Internet;

a memory that is configured to store an IP address corresponding to the receiving apparatus not having the IP address;

a controller that is configured to receive an Internet-frame including the IP address corresponding to the receiving apparatus not having the IP address and data from the transmitting apparatus, to search the memory for the receiving apparatus not having the IP address to which the data is to be transferred, based on the corresponding IP address

included in the Internet-frame, and to transfer the data to the receiving apparatus not having the IP address.

Claim 17. (new) A gateway apparatus according to claim 16, wherein the data from the receiving apparatus is configured into TCP packets.

Claim 18. (new) A gateway apparatus according to claim 16, wherein the receiving apparatus not having an IP address is at least one of a printer, a scanner, a television, a digital camera, a refrigerator, a hot-water supply, an electric power meter and a water meter.

Claim 19. (new) A gateway apparatus capable of connecting to the Internet, the apparatus being one of a plurality of components in a home network, the apparatus comprising;

an interface that is configured to connect with a receiving apparatus not having an IP address;

a communicator that is configured to communicate with a transmitting apparatus through the Internet;

a memory that is configured to store an IP address corresponding to the receiving apparatus not having the IP address and an application program which converts received data into data which the receiving apparatus not having the IP address can interpret; and

a controller that is configured to receive an Internet-frame including the IP address corresponding to the receiving apparatus not having the IP address and data from the transmitting apparatus, to search the memory for the receiving apparatus not having the IP

address to which the data is to be transferred, based on the corresponding IP address included in the Internet-frame, and to transfer the data to the receiving apparatus not having the IP address; wherein,

said controller converts the received data into data which the receiving apparatus not having the IP address can interpret, by utilizing the application program in the memory, when the received data is data which the receiving apparatus not having the IP address can not interpret.

Claim 20. (new) A gateway apparatus according to claim 19, wherein the data from the receiving apparatus is configured into TCP packets.

Claim 21. (new) A gateway apparatus according to claim 19, wherein the receiving apparatus not having an IP address is at least one of a printer, a scanner, a television, a digital camera, a refrigerator, a hot-water supply, an electric power meter and a water meter.

Claim 22. (new) A method for transmitting data from a transmitting apparatus not having an IP address in a home network through the Internet to a receiving apparatus, the method comprising;

receiving data from the transmitting apparatus not having the IP address;

configuring the data for Internet transmission;

generating an Internet-frame based on the data and an IP address which is assigned to a receiving apparatus, the IP address assigned to the receiving apparatus being input by an input device; and

sending the Internet-frame to the receiving apparatus.

Claim 23. (new) A method for receiving data from a transmitting apparatus in a home network through the Internet, a memory storing an IP address corresponding to a receiving apparatus not having an IP address, the method comprising;

receiving an Internet-frame including the IP address corresponding to the receiving apparatus not having the IP address and data from the transmitting apparatus;

searching the memory for the receiving apparatus not having the IP address to which the data is to be transferred, based on the corresponding IP address included in the Internet-frame; and

transferring the data to the receiving apparatus not having the IP address.

Claim 24. (new) A method for receiving data from a transmitting apparatus through the Internet, a memory storing an IP address corresponding to a receiving apparatus not having the IP address and an application program which converts received data into data which the receiving apparatus not having the IP address can interpret, the method comprising;

receiving an Internet-frame including the IP address corresponding to the receiving apparatus not having the IP address and data from the transmitting apparatus;

searching the memory for the receiving apparatus not having the IP address to which the data is to be transferred, based on the corresponding IP address included in the Internet-frame;

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converting the received data into data which the receiving apparatus not having the IP address can interpret, by utilizing the application program in the memory, when the received data is data which the receiving apparatus not having the IP address can not interpret; and

transferring the data to the receiving apparatus not having the IP address.